

THAT WHICH IS CLAIMED:

1. A traffic notification system comprising:
a location determination system that is configured to determine a geographic
5 location of a subscriber; and
an automated traffic notification system that is configured to automatically
transmit a traffic notification message that is based on the geographic location of the
subscriber to a wireless terminal that is associated with the subscriber.
- 10 2. A system according to Claim 1, wherein the location determination
system is configured to automatically obtain a plurality of location readings while the
subscriber is in transit to automatically monitor the location of the subscriber over a
desired monitoring period.
- 15 3. A system according to Claim 1, wherein the location determination
system uses measurements from a global positioning system to determine the location
of the subscriber at a plurality of different times during a monitoring period of
interest.
- 20 4. A system according to Claim 1, wherein the traffic notification system
is configured to automatically transmit customized traffic messages to wireless
communication devices of respective subscribers based on the dynamically
determined geographic location and direction of travel and/or identified destination of
the subscribers.
- 25 5. An automated location-intelligent traffic notification system
comprising:
a) a subscriber database configured with subscriber specific data from a
plurality of subscribers;
30 b) a traffic notification server in communication with the subscriber database;
c) a location determination system in communication with the traffic
notification server, the location determination system configured to determine a
geographic location of a subscriber during at least one time period of interest; and

d) a traffic monitoring system configured to provide traffic information for routes, streets, roadways and/or travel paths in at least one geographic region,

wherein, during operation, the traffic notification server receives traffic condition data for a route, street, roadway and/or travel path in the at least one

5 geographic region from the traffic monitoring system, identifies a subscriber that may be affected by the traffic condition using the determined geographic location of the subscriber and data from the subscriber database, and then automatically transmits a traffic notification message to the identified subscriber.

10 6. A system according to Claim 5, wherein the location determination system is configured to monitor the location of the subscriber over a desired monitoring period while the subscriber is in transit.

7. A system according to Claim 5, wherein the location determination
15 system uses measurements from a global positioning system to determine the location of the subscriber at a plurality of different times during a monitoring period of interest.

8. A system according to Claim 5, wherein the traffic notification server
20 is configured to automatically transmit customized traffic messages to wireless communication devices of respective subscribers based on the dynamically determined geographic location and direction of travel and/or identified destination of the subscribers.

25 9. A system according to Claim 5, wherein the traffic notification server is configured as a web server with an internet protocol that accepts updates in traffic data corresponding to substantially real-time traffic conditions for a plurality of roadways, streets, and travel paths in the at least one geographic region, and wherein the traffic monitoring system is configured to publish and/or provide updates in the
30 traffic condition data to the traffic notification web server in substantially real-time.

10. A system according to Claim 5, wherein the traffic notification server is in communication with a plurality of wireless communication devices, a respective

one of which is associated with a respective subscriber.

11. A system according to Claim 10, wherein the location determination system is configured to communicate with a GPS receiver in a wireless communication device associated with a respective subscriber to determine the location of the subscriber by receiving data from a global positioning system based on the GPS receiver in the wireless communication device.

12. A system according to Claim 9, wherein the location determination system automatically monitors the location of the subscriber during a monitoring period by receiving data regarding the position of the subscriber's vehicle and/or wireless communication device at desired intervals.

13. A system according to Claim 9, wherein the traffic notification server comprises computer code that is configured to provide a program profile management subsystem that is configured to provide web-based management of subscriber data in the subscriber database to be able to extract a plurality of subscriber records including a plurality of: subscriber identified driving routes, subscriber identified destinations, subscriber communication notification preferences and/or desired traffic monitoring periods of interest, and provide the extracted subscriber data to the traffic notification web server.

14. A system according to Claim 13, wherein the traffic notification server comprises computer program code that is configured to provide a notification control subsystem that controls traffic message transmission notifications to subscribers and cooperates with the profile management subsystem computer program code, the notification control subsystem being configured to:

(a) consider the subscriber's present geographic location based on the most recent data from the location determination system and at least one of the subscriber's direction of travel, travel route, and/or identified destination;

(b) determine whether the subscriber is affected by a reduced drivability traffic condition based on the subscriber's substantially real-time determined geographic location; and

(c) determine how and/or where a traffic notification message will be sent to the subscriber based on a predetermined subscriber preference held in the subscriber database.

5 15. A system according to Claim 5, wherein the traffic notification message is personalized for each subscriber based on substantially real-time traffic information on travel routes of interest in a geographic location proximate the current location and/or a potential encounter with a determined traffic condition based on the subscriber's present location and/or destination.

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 16. A system according to Claim 5, wherein the traffic notification message is generated to the subscriber automatically over a wireless network without the subscriber actively prompting the system about a route or geographic region in transit.

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 17. A system according to Claim 5, wherein the traffic notification server automatically transmits short text messages to particular subscribers based upon the dynamically determined geographical location of each subscriber.

20 18. A system according to Claim 5, wherein the traffic monitoring system includes a traffic monitoring information database that receives updates of traffic information from at least one of road sensors, traffic cameras, traffic reports, or telephone callers.

25 19. An automated location-intelligent traffic notification system comprising:

 a) a subscriber database configured with subscriber specific data from a plurality of subscribers;

 b) a traffic notification server in communication with the subscriber database;

30 c) means for determining a geographic location of the subscribers in communication with the traffic notification server, during at least one time period of interest;

 d) means for monitoring traffic for obtaining traffic condition information for

routes, streets, roadways and/or travel paths in at least one geographic region; and

e) means for transmitting traffic notification messages to subscribers, wherein, during operation, the traffic notification server receives the obtained traffic condition information, identifies a subscriber that may be affected by the traffic condition using
5 the determined geographic location of the subscriber, and then automatically transmits a traffic notification to the identified subscriber.

20. A method for providing traffic notices, comprising:
determining the geographic location of a subscriber; and
10 automatically transmitting a traffic notification message that is based on the geographic location of the subscriber to a wireless terminal that is associated with the subscriber.

21. A method for providing traffic information to a subscriber over a
15 wireless network, comprising the steps of:
providing a subscriber database of information corresponding to a plurality of subscribers;
monitoring geographic locations of a respective subscriber while the subscriber is in transit;
20 identifying relevant traffic conditions by correlating traffic conditions in a particular location to a respective subscriber's monitored geographic location; and
automatically relaying a wireless traffic notification message to a respective subscriber if the subscriber is identified as affected by a traffic condition based on the monitoring and identifying steps.

22. A method according to Claim 21, further comprising determining when an adverse traffic condition arises and/or exists in a subscriber's present travel route based on the monitored geographic location of the subscriber, and wherein the relaying step comprises alerting the subscriber about the adverse traffic condition.
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23. A method according to Claim 21, further comprising:
accepting subscriber input from a web browser to a traffic system having a web server to provide subscriber information for the subscriber database that
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identifies a starting location and destination of a planned course of travel of a respective subscriber; and

generating at least one available driving route based on a drivability assessment using actual or predicted traffic conditions associated with a plurality of potential travel routes corresponding to traffic information provided by a traffic monitoring system.

24. A method according to Claim 23, wherein the traffic monitoring system comprises a traffic database, and wherein the generating step comprises calculating an expeditious route to travel between the locations relative to alternate travel routes based upon traffic information stored in the traffic database.

25. A method for providing traffic information according to Claim 24, wherein the expeditious route is calculated by:

- a) determining a plurality of potential routes between the present location and the intended destination location;
- b) selecting a predetermined number of the most geographically direct routes;
- c) calculating a predictive time to travel each selected route; and
- e) comparing the total times to travel each route.

26. A method for providing traffic information according to Claim 25, wherein the subscriber responds to automated prompts from a traffic notification server to receive an advisory of a time-efficient route from a plurality of *a priori* routes entered into the subscriber database by the subscriber based upon current traffic information.

27. A method for providing traffic information according to Claim 21, wherein the subscriber pre-configures the subscriber database by:

- a) entering a wireless directory telephone number;
- b) selecting a first travel route identifying at least a portion of a roadway; and
- c) providing a code or name for the first travel route.

28. A method for providing traffic information from a traffic database to a subscriber over a wireless network during a desired monitoring interval or period comprising the steps of:

5 evaluating whether a subscriber requests to receive traffic information
at a present time from a subscriber database;
dynamically determining a geographic location of the subscriber using
a terrestrial and/or celestial based geographic location determination system;
retrieving traffic information for a particular geographic area and/or
travel zone corresponding to a travel path of the subscriber and the determined
10 geographic location of the subscriber; and
automatically transmitting a short message to a subscriber's wireless
communication device, wherein relevant traffic information customized to the
subscriber's travel path is reported to the subscriber in the short message while
the subscriber is in transit.

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29. A method according to Claim 28, wherein the system takes into account the subscriber's travel direction and destination when generating the transmitted customized relevant traffic information.

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30. A method for providing traffic information according to Claim 28, wherein the subscriber's geographic location is determined using a GPS receiver associated with the subscriber's vehicle and/or wireless communication device.

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31. A method according to Claim 28, wherein the evaluating, determining, retrieving and transmitting steps are carried out using a web-based traffic notification server.

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32. A method for providing automated location-intelligent traffic notifications comprising:

providing a subscriber database configured with subscriber specific data from a plurality of subscribers;
determining a geographic location of a subscriber a plurality of times during at least one time period of interest and storing the geographic location data in the

subscriber database during a monitoring period;

monitoring the geographic location of the subscriber during the monitoring period based on the geographic location data and the subscriber's direction of travel;

5 providing substantially current traffic information for routes, streets, roadways and/or travel paths in at least one geographic region;

evaluating when there is a change in a traffic condition a route, street, roadway and/or travel path in the at least one geographic region;

10 identifying a subscriber that may be affected by the change in the traffic condition using the determined geographic location of the subscriber and data from the subscriber database; and then

automatically transmitting a traffic notification message to the identified subscriber to thereby provide updated relevant traffic information to the subscriber without requiring the subscriber to call, respond to prompts or enter a request to a remote traffic monitoring service for the updated traffic information in transit.

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